



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/689,655	10/22/2003	Kenji Nagatomi	66315-013	6498

7590 06/26/2006  
McDERMOTT, WILL & EMERY  
600 13th Street, N.W.  
Washington, DC 20005-3096

EXAMINER

RIVERO, MINERVA

ART UNIT	PAPER NUMBER
----------	--------------

2627

DATE MAILED: 06/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/689,655	Applicant(s) NAGATOMI ET AL.	
	Examiner Minerva Rivero	Art Unit 2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 22 October 2003.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☒ Claim(s) 5-20 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Priority***

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Claim Objections***

2. Claims 5-20 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim cannot depend from any other multiple dependent claim. See MPEP § 608.01(n). Accordingly, the claims have not been further treated on the merits.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Art Unit: 2627

4. Claims 1-4 are rejected under 35 U.S.C. 102(b) as being anticipated by Mori *et al.* (US 5,867,468), hereinafter Mori.

5. Regarding claim 1, Mori discloses an optical pickup device for performing recording and/or reproduction of information by irradiating laser light onto a disk, comprising (Col. 4, Lines 44-48):

detection means for detecting spherical aberration resulting from a thickness error of an intermediate layer existing between a disk surface and a recording layer (Col. 16, Lines 9-15);

and correction means for correcting the spherical aberration detected by the detection means (*optimizing the condenser lens*, Col. 15, lines 26-28),

the detection means including:

a lens designed to converge reflection light from the disk when a thickness of the intermediate layer is greater or smaller than an optimum value by a predetermined degree (*optical pickup operation when thickness is 0.6mm and condenser lens*, Col. 15, Lines 8-13 and 26-33; *high-density vs. low-density optical disk*, Col. 1, Line 60 – Col. 2, Line 12); and

a photodetector that receives the reflection light converged by the lens to output an electric signal, and when the thickness of the intermediate layer assumes the optimum value, receives a predetermined portion of the reflection light with reference to a total light quantity of the reflection light (*divided light*, Col. 15, Lines 38-40),

the correction means including a diffusion angle converter that changes a diffusion angle of the laser light traveling toward the disk in accordance with a servo signal generated from the electric signal outputted from a photodetector (*light is converted from a parallel light into a light having a diffusion angle in a converging direction*, Col. 15, Lines 38-43).

6. Regarding claim 2, Mori discloses the lens is constructed using an aspherical lens that condenses the reflection light at an almost single point when the thickness of the intermediate layer is greater or smaller than the optimum value by the predetermined degree (*condenser lens is most often aspherical*, Col. 8, Lines 45-50; *optical pickup operation when thickness is 0.6mm, condenser lens*, Col. 15, Lines 8-13 and 26-33; *high-density vs. low-density optical disk*, Col. 1, Line 60 – Col. 2, Line 12).

7. Regarding claim 3, Mori discloses the lens is constructed using a spherical lens designed to set spherical aberration of the reflection light to be close to a minimum value when the thickness of the intermediate layer is greater or smaller than the optimum value by the predetermined degree (*condenser lens*, Col. 15, Lines 8-13 and 26-33; *high-density vs. low-density optical disk*, Col. 1, Line 60 – Col. 2, Line 12).

8. Regarding claim 4, Mori discloses the photodetector is constructed using at least one photosensor, with a shape and arrangement of the photosensor being adjusted to receive around half a total light quantity of the reflection light converged by the lens

Art Unit: 2627

when the thickness of the intermediate layer assumes the optimum value (*difference between sum of light quantity in each pair is zero in an in-focus condition*, Col.17, Lines 12-23, see Figs. 13-15) [See Applicants' Specification, Page 7, Lines 4-18.].

### **Conclusion**

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Eguchi *et al.* (US 5,473,154) disclose an optical pickup apparatus employing nonpolarization beam splitter and quarter wavelength plate.

Tanaka (US 6,781,944) discloses optical information processor including a Fresnel optical lens.

Mori *et al.* (US 6,707,615) discloses an optical pickup apparatus which restricts aberration.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Minerva Rivero whose telephone number is (571) 272-7626. The examiner can normally be reached on Monday-Friday 9:00 am - 6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wayne Young can be reached on (571) 272-7582. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2627

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MR 6/16/06



WAYNE YOUNG  
SUPERVISORY PATENT EXAMINER